CASE

OF

ENCYSTED DROPSY OF THE PERITONEUM,

IN WHICH SUPPURATION HAD OCCURRED, AND ABDOMINAL SECTION WAS PERFORMED, WITH RECOVERY.

By

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THE occurrence of encysted dropsy of the peritoneum is regarded by the authorities, whom I have been led to consult, as so rare a pathological condition and of such interest in its clinical aspects, that I feel warranted in asking the attention of the Fellows of the College to the present case.

On November 10, 1874, I was kindly asked by my friend, Dr. S. Weir Mitchell, to see in consultation with Dr. William Carroll and himself, a patient suffering from an abdominal tumor. Dr. Mitchell had been previously called in consultation by Dr. Carroll, and had advised with him in reference to the medical treatment of the case. At the request of these gentlemen I made a careful examination of the patient, having obtained the following history:—

Mrs. E. L., æt. 40, native of Ireland, married, and has borne six children, the youngest being seven years of age. The patient dates the beginning of her illness from her last

confinement, in which she was informed that the placenta was adherent, and that she suffered severely from post-partum hemorrhage. She was so much prostrated by the loss of blood as to cause much anxiety to her physician and friends in regard to her recovery. She was able, however, to leave her bed after confinement, at the period usual to her—two weeks—and to resume the care of her house. About three months after confinement, she noticed in the right inguinal region a small swelling, which was freely movable, so that it could be pushed about by the finger. For the period of one year the swelling remained quiescent, then it began to enlarge until it attained the size of a large goose egg. At this time pain was felt in the region of the tumor, and it extended gradually over the entire abdominal surface. About one year ago, six years after the appearance of the tumor, the abdomen began to enlarge, and has so continued until this date. Her general health, which had been previously good, began to decline. Menstruation had been regular and proper until a year since, when it became irregular and painful, and the flow was thick and tarry in character.

On making an examination I found the patient much emaciated and debilitated. The heart's action was feeble and intermittent. Orthopnœa was present. The expression of the face was haggard and betokened much suffering. The pain was constant and of the most exhausting character, and the patient expressed herself as suffering from a "great burden." There was no œdema. The abdomen was enlarged to the size of a full term pregnancy. The surface was smooth and regular, and the veins were not enlarged. The abdominal walls were not very tense, but they could not be lifted from the tumor. On percussion, resonance was elicited over the entire surface as far below as the line of the umbilicus; below this line dulness was marked on both sides—especially on the right. Fluctuation was not very distinct, but still perceptible, giving evidence of imprisoned fluid. Change of position did not affect the percussion sounds.

A vaginal examination showed that the uterus was in a

condition of marked ante-version, and fixed in its position. Pressure applied to the tumor through the abdominal walls did not move the uterus, owing to the fixed position of which it was impossible to introduce the sound to a greater depth than one inch. The finger in the vagina could detect a tumor in the pelvic cavity.

As the result of my examination I announced to Drs. Carroll and Mitchell that, owing to the doubtful character of some of the signs presented, I was not positive as to the exact nature of the tumor. It possessed so many of the characteristic signs of a multilocular cyst of the ovary that I was disposed to so regard it, and expressed myself to this effect. I asked that a further examination be permitted before deciding as to operative measures. This request was granted, and three days subsequently I made a more extended examination, the result of which was to render the diagnosis still more obscure. It was evident, however, that something must be done to relieve the patient, who was daily losing strength on account of the great suffering to which she was subjected. Accordingly I advised an operation of exploration, and, if the tumor was found to be of a character to permit its removal without hazarding too greatly the life of the patient, that the operation should be continued, and the tumor removed. This proposition the patient assented to and Drs. Carroll and Mitchell approved.

The patient's condition was improved, so far as it was possible, by tonic treatment, and on November 22, in the presence of Drs. Mitchell, Carroll, Brinton, Keen, Parrish, Jones U. S. Navy, Mann, and Mr. Stedman, medical student, I opened the abdominal cavity, making an incision two inches in length in the linea alba, and midway between the umbilicus and the pubes. On introducing the finger I found adhesions between the tumor and the parietes of the abdomen, which were separated with some difficulty. I enlarged the incision to four inches in order to obtain a more extended view of the tumor. Through this opening I introduced my hand and separated the parietal adhesions,

which were general. On making an examination after the separation I found that the anterior wall of the tumor, above, was in great part formed by the great omentum, covered by a dense layer of lymph, and firmly adherent to the subjacent intestines; its lower edge was rounded and was fastened to the intestines below, forming a smooth junction with them. Below the border of the omentum the intestines were firmly adherent and formed the remaining portion of the anterior wall.

Seeking for the line of attachment between the intestines, I made an opening with my finger and gave exit in this way to over two gallons of fibrinous pus. The adhesions between the intestines were freely broken up and free exit thus given to the contents. Owing to the very firm adhesions between the thickened omentum and the intestines which lay beneath, it was found impossible to separate them. The effort made to accomplish this, detached at one point the peritoneal layer of the bowel. The omentum was extremely vascular, and free hemorrhage occurred on section of it. At one point Monsel's solution and the hot iron failed to control the bleeding, which yielded finally to the application of a carbolized silk ligature, the ends of which were cut off close, when the ligatured portion was returned to the cavity of the abdomen. The parietal peritoneum could not be recognized as such, the entire inner surface of the abdominal wall being covered by a layer of lymph measuring at least one-third of an inch in thickness.

The intestines were fastened together by dense bands of lymph, and their surfaces were also covered by dense layers. On making a section of the omentum the normal fat tissue was found surrounded by layers of lymph one-half of an inch in thickness.

The abdominal cavity was cleansed by soft sponges and the wound closed by five iron-wire sutures, an opening being left at the lower part for the purpose of drainage. The dressing was completed by the application of a compress of cotton-wool and a bandage, and the patient was placed in bed, and

one-third of a grain of morphia given hypodermically. The pulse was 96, and feeble; the skin was cool; vomiting occurred. Towards evening, reaction was fully established, the pulse rising to 118, and the skin becoming hot. The catheter was employed to relieve the bladder, the color and quantity of the urine being normal. A diet of barley-water was ordered. Morphia, in one-third grain doses, was given hypodermically as required.

On the day following the operation, November 23, the condition of the patient was good; vomiting occurred only once; the pulse was 90, and free from intermissions. The patient slept comfortably, and did not complain of pain except in the wound.

On the 24th the pulse rose to 100. During the night the patient had had eight copious, loose evacuations, which had produced much exhaustion. Brandy, beef-tea, and milk were ordered as diet. I removed the dressings, and found the wound in good condition. The lower portion of the wound, which had been left open, had closed. I broke up the union which had taken place and introduced a gum-elastic catheter of large size through the opening, and pushed it gently into the pelvic cavity. To this I attached a glass syringe of the capacity of an ounce, and evacuated by this means over six ounces of fibrinous pus. After removing the pus I washed out the cavity with a very weak solution of carbolic acid, adding for this purpose one ounce of a solution of the strength of one drachm of the acid to six ounces of water, to a pint of tepid water. I injected a syringeful of this solution, and then withdrew it, and continued the operation until the returning fluid was clear. A tent was then placed in the wound in order to keep it open; compresses, moistened with the solution of carbolic acid, were applied to the wound. Some pain was felt by the patient when the catheter was introduced. The carbolic acid solution did not cause pain, unless it was injected in large quantities. Towards evening the pulse rose to 110.

The next day, November 25, the pulse was 104, and

showed signs of weakness; four alvine evacuations had occurred during the night and morning. About six ounces of pus were removed from the pelvic cavity, and the cavity was washed out as before.

November 26. The pulse was 100, and the condition of the patient was good. Five ounces of pus were drawn off and the cavity was syringed.

November 27. The pulse was 98, and fuller; about four ounces and a half of pus were removed. In order to check suppuration I ordered, after consultation with Dr. Carroll, two grains of quinia four times daily, with twenty drops of the tincture of the chloride of iron. The quinia was increased gradually, until she received twelve grains daily. The stomach did not reject the medicine, and digestion was not interfered with.

Three ounces of pus were evacuated on the 28th. The pulse rose to 100, noted after the wound had been dressed. Slight tympanites was observed, and the tongue was dry. Three of the sutures were removed, those from the upper part of the wound; the lower sutures were allowed to remain, in order to support the opening through which the catheter was introduced. Two days later the lower sutures were removed.

From this date until December 10, when she sat up, the patient's condition steadily improved, the pulse declining to 80, and the quantity of pus removed decreasing to about one ounce daily. This quantity gradually decreased until the 21st of December, when none could be drawn out by the syringe and catheter. It was evident that adhesions had formed around the channel through which the catheter passed into the pelvic cavity. The sinus gradually closed, and finally, January 6, 1875, the opening in the abdominal wall healed.

By degrees the patient returned to the cares of her house and family, being able to perform some of the more arduous duties, as ironing, etc. She keeps herself, at my suggestion, upon tonic treatment, although, according to the report, not as faithfully as could be desired. She is entirely free from

pain, and only when very much fatigued does she suffer with pain in her back.

Owing to the thickened omentum and agglutinated condition of the intestines, the abdomen is still prominent, being about one-third the size it was prior to the operation. There is no evidence of the existence of fluid within the cavity.

In connection with this case I venture to suggest for consideration a few points which may be deemed of interest. These relate to the character of the cyst, the question of diagnosis, and the treatment adopted. As to the character of the cysts, they may present different forms. In one, the fluid may be contained in a cyst in front of the intestines, formed anteriorly by the wall of the abdomen, and posteriorly by the omentum and intestines fastened together by adhesions; in another form, the fluid may accumulate and be imprisoned in a cyst behind the intestines, in the cul-de-sac of Douglas, in which the intestines and omentum united by adhesions constitute the anterior wall. In the female, the uterus and broad ligaments might also form a portion of the wall. In still other instances, a pocket or cyst may be formed between the folds of the adherent intestines and gradually be distended by the effused fluids. No matter what the variety of the cyst, its formation is always preceded and produced by peritonitis, which may be either local or general in its character. When we consider the appearances presented in these cases, it would seem evident that the inflammation must of necessity be of the severest character, involving at once the entire serous surfaces. In the case reported, however, the inflammation was, according to the history given by the patient, local, and

of such character as not to detain her in bed beyond the usual period of getting up after confinement.

In quite a large experience in tumors of the abdominal cavity, derived from the practice of Dr. Washington L. Atlee, I have been in many cases interested in observing the existence of extensive inflammatory adhesions, when not the least information relating to an attack of peritonitis could be gained from the patient or her attending physician. The formation of adhesions in certain intances has been ascribed to pressure made by a tumor steadily increasing in size, and the changes which are found are thought to take place without any of the usual symptoms. When we are called upon to treat a case of acute peritonitis, and observe the intensity of the inflammation as manifested by the sufferings of the patient and by the other symptoms presented, we cannot but confess ourselves at a loss to explain in what manner, under other conditions, the products of apparently the same cause may be formed without the most marked symptoms. It would appear that this membrane, at one time so exquisitely sensitive, and so prone to assume rapidly and extensively intense inflammation, may at another time pass through all the stages of inflammation without provoking any symptoms to attract the attention of the patient or to call for medical interference.

When the character of the cyst is considered, the difficulties of the diagnosis in this case can be fully appreciated. The history distinctly pointed to the existence of a tumor originating in the right inguinal region, at first quite small and freely movable under the finger. The physical signs showed unmistakably the presence of a tumor containing fluid. The

absence of resonance on percussion was caused by the thickened overlying omentum, and the thick purulent fluid in the cyst gave rise to quite well-marked fluctuation. Inferiorly, the walls of the cyst were so thickened by plastic deposits as to prevent the determination of its true nature by vaginal examination. The decline in the health of the patient during the last year might have been accounted for by suppuration in an ovarian cyst. It was no doubt caused by suppuration in the false cyst.

The question as to the proper treatment to be adopted in these cases is one of importance. The question relates rather to the method in which the proper treatment should be carried out, as I cannot conceive of any treatment leading to a successful result other than that which should promptly give exit to the purulent fluid, and prevent its accumulation. This may be accomplished by tapping, or by incision as practised in this case. In those forms of encysted dropsy in which the fluid lies in front of the intestines, evacuation with the trocar can be obtained without danger. Where the cyst lies behind the intestines, tapping through the abdominal walls would involve the great danger of puncturing the intestines which compose in part the walls of the cyst. The question of the means to be employed in the after-treatment should, it seems to me, guide in the selection of the operation. The opening made by the trocar, large or small, does not give the free exit to the pus which is desirable, nor does it permit the free washing of the cavity so essential in interfering with the suppurative action.

As in empyema we are advised to make a free incision in order to accomplish evacuation of pus, so in

these cases does it seem proper to perform the same operation, and to apply directly to the parts such remedies as will change the character of the surfaces involved.

Drainage of the abdominal cavity after ovariotomy has been practised of late years with most decided success, and various methods have been employed to effect it. It has been accomplished by making an opening into the vagina through Douglas's cul-de-sac, and through this carrying either a tent or a drainage tube. The tent and drainage tube have also been introduced into the cavity through the lower part of the abdominal wound. It seems to me that it could be effectually done by a properly constructed tube with a syringe attached, as an improvement on the means employed in this case.

Of the great importance of drainage after ovariotomy, in cases in which extensive adhesions have been separated, there can be no question.